



Purpose and Applicability of Waste Management Regulations

Everyone generates waste on a daily basis and is subject to the waste regulations. Improper management of waste can impact surface and groundwater quality, as well as air quality, when the waste is improperly handled and disposed of (i.e., illegal dumping along roadsides, in the woods, in illegal landfills, in wetlands, in lakes and streams, or by being improperly burned). Your legal responsibility as a generator of any quantity of waste extends from “cradle to grave.” This covers the time from when the waste is first generated through its ultimate disposal.



Agencies and Their Laws and Rules

■ **Indiana Department of Labor**

The Indiana Department of Labor is responsible for enforcing Occupational Safety and Health Administration regulations in the state of Indiana. INSafe is a division of the Department of Labor that works with Indiana’s employers, employees, labor unions, professional groups, trade organizations, and others to ensure workplace health and safety. For detailed information, refer to pages 165–224. INSafe staff can be reached at (317) 232-2688. INSafe’s Web site is www.dol.IN.gov/2696.htm.

■ **Indiana Department of Homeland Security**

Your building must meet the building code classification requirements of the Indiana Department of Homeland Security’s (IDHS) Division of Fire and Building Safety. The applicability of these requirements depends on several factors, including building size, type of work performed, and location of the structure (including surrounding structures). If you perform welding, use any open flame, or spray paint, your building must meet the more stringent Class H building code requirements than if your business simply exchanges parts. To obtain information specific to your business, contact the Plan Review section of IDHS’s Division of Fire and Building Safety at (317) 232-6422 or visit IDHS’s Web site at www.IN.gov/dhs/2843.htm.

As with the building classifications, the regulations covering flammable, combustible and incompatible materials are usually case-specific. Please note that this manual addresses only the general requirements of the IDHS’s Division of Fire and Building Safety. Many of these regulations depend upon a number of variables.

Most businesses are also required to have an oil-water separator. The capacity of the separator depends on the size of the area draining into the separator. Contact IDHS's Division of Fire and Building Safety or IDEM's Compliance and Technical Assistance Program (CTAP) for more information.

To receive specific information on complying with fire safety requirements, contact the Plan Review section of IDHS's Division of Fire and Building Safety or call CTAP for assistance.

■ U.S. Department of Transportation

The U.S. Department of Transportation (U.S. DOT) incorporates Resource Conservation and Recovery Act hazardous wastes as one of the types of hazardous materials that must be transported according to U.S. DOT specifications (as set forth in Title 49, Section 171.3 of the Code of Federal Regulations [49 CFR 171.3]). To obtain information on regulations governing the packaging, labeling, placarding, and transportation of hazardous materials or hazardous waste, refer to the U.S. DOT Federal Motor Carrier Safety Administration's *How to Comply with Federal Hazardous Materials Regulations* at www.fmcsa.dot.gov/safety-security/hazmat/complyhmregs.htm. You can also contact U.S. DOT at (202) 366-4000 or the Indiana Department of Transportation at (317) 232-5533. INDOT's Web site is at www.indot.IN.gov.

Solid Waste

Solid waste includes garbage, rubbish, yard waste, ashes, incinerator ash and residue, industrial sludges, and solid commercial and industrial waste. Solid waste management as discussed in this section does not pertain to hazardous waste that is in a solid form.

■ Waste Reduction and Recycling

Before beginning a waste reduction or recycling program, you need to know what types of waste and how much waste is being generated. IDEM encourages business and industry to implement pollution prevention and waste minimization practices. The Source Reduction and Recycling Branch of IDEM's Office of Pollution Prevention and Technical Assistance works with local solid waste management districts, the Indiana Recycling Coalition, and the Solid Waste Planning Advisory Council to achieve this goal.

Identifying Wastes and Waste Reduction Opportunities

A business owner or manager can conduct a waste survey to properly identify many types and quantities of waste and determine how to reduce waste generation. When you conduct your waste survey:

- Tour the whole facility and ask employees questions about work processes and the waste generated. Identify what is regulated as a hazardous waste, what can be managed as a solid waste, and how much waste is generated. Ask for suggestions about how waste could be reduced. Consider all wastes that are being generated from the different facility areas, including the offices.
- Trace all chemical purchases for each step of every process or activity in the facility. Consider whether materials can be substituted that would generate less or no hazardous waste.
- Identify where in-house recovery and reuse of hazardous materials are possible. Review the regulations or contact IDEM to determine if you need to be permitted as a hazardous waste treatment facility.
- Observe to see if employees are creating more hazardous waste by mixing other waste with known hazardous waste. For example, your facility can reduce its volume of hazardous waste by not placing non-hazardous paints in the same container as waste solvents.
- Determine if different wastes are being mixed together. This mixing usually makes recycling difficult, if not impossible, and disposal more expensive.
- Develop and maintain accurate inventory control of all products. This helps to eliminate excessive inventory. Buying in bulk or ordering on a schedule will not be cost effective if the product has to be disposed of because its shelf life expired.

Once you know where the wastes are being generated, you may be able to reduce disposal costs by implementing waste reduction and recycling programs. Along with saving money on disposal costs, you might save money by purchasing less materials and even earn money by selling the collected materials. You need to have both management and worker support to make these programs work.

Waste reduction involves implementing activities that result in less waste being generated. These activities include the following:

- Change processes so less scrap is created.
- Purchase supplies that have less packaging.
- Have materials shipped in returnable and reusable containers.
- Use materials on a *first in, first out* basis so products don't become too old to use.
- Replace disposable materials with reusable and recyclable materials.

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- Establish an incentive program that encourages workers to suggest ways to reduce waste.
- Train employees in waste reduction methods.
- Install reclamation units to reduce the amount of waste needing disposal (e.g., recover spent solvents from parts washers).

Recycling involves converting materials from the waste stream into other usable goods. The first step for facilities involves the collection of those materials. If the materials cannot be used in-house, then the collected materials are marketed through private brokers or local community recycling programs. Several areas in Indiana now have reuse centers that offer these materials for community or school activities.

Check with your broker or local program to find out what they accept, how the materials must be prepared, and other collection details. You may need to use different brokers or several different recycling programs to market your collected materials because the individual broker or program might not handle the type or volume of material you have. Commonly collected materials include:

- Drums and other containers;
- Glass;
- Paper, including office paper and corrugated cardboard;
- Scrap metal; and
- Wood pallets.

Visit the Web at www.recycle.IN.gov for:

- Information on recycling opportunities in Indiana;
- Educational information for teachers;
- Sources of funding for businesses and local governments;
- Local composting and yard waste programs; and
- Local household hazardous waste collection programs.

The Indiana Materials Exchange (IMX) or *Xchange* at www.recycle.IN.gov/2450.htm is a Web-based tool for the dissemination of information on surplus and waste materials either available from, or wanted by industrial and commercial entities.

■ Solid Waste Disposal

No matter how effective your waste reduction and recycling programs are, you probably will still need to dispose of some solid waste. Examples of solid waste that may require disposal include: nonrecyclable office paper, breakroom waste such as discarded food, and packaging materials such as nonrecyclable empty containers. Before solid waste is hauled to a licensed disposal facility, it should be stored in leak-proof, covered containers. This will help keep the waste from blowing away, prevent access by rodents and

other animals, and reduce odor problems. Check to see if your local authorities have an ordinance that requires a privacy-type fence around the dumpster. Solid waste can be stored in a waste pile, but you may need to obtain a permit from IDEM. If you intend to store any waste in a pile, discuss the requirements with IDEM.

Waste management regulations prohibit open dumping of business waste. Solid waste must be disposed of at licensed disposal facilities. You can haul your own waste to a licensed landfill, incinerator, or transfer/processing facility. Another option is to contract with a solid waste hauler to transport your solid waste to an approved facility. You should know how the hauler handles and disposes of waste because you can be held liable for damages and cleanup costs if the waste is improperly managed.

Manifests are not required for hauling and disposing of solid waste, with the exception of scrap tires. Tire management is discussed below and on page 32. Although you don't have to manifest solid waste, you may want to keep records of when, where, and how much solid waste was removed from your business. This practice gives you an accurate record of waste disposal for management purposes and is valuable if a liability question arises.

Open Burning

Open burning is defined under Title 326, Article 4, Rule 1, Section 0.5, Number (6) of the Indiana Administrative Code [326 IAC 4-1-0.5(6)] as “the burning of any materials wherein air contaminants resulting from combustion are emitted directly into the air, without passing through a stack or chimney from an enclosed chamber.” Open burning is generally prohibited in Indiana. For more detailed information on open burning, please refer to IDEM's Web site at www.idem.IN.gov/4549.htm and www.idem.IN.gov/4980.htm.

Waste Tire Management

The rules governing waste tire management are located in 329 IAC 15. For confidential compliance assistance with these rules, you may call the Office of Pollution Prevention and Technical Assistance at (800) 988-7901 or (317) 232-8172. If you don't need confidential assistance, please call the Permits Section of IDEM's Office of Land Quality at (800) 451-6027, ext. 2-0066 or (317) 232-0066.



FOR MORE INFORMATION

- Registered waste tire transporters
- Indiana registered waste tire processors

www.idem.IN.gov/4862.htm

► Waste Tire Generators

Indiana Code (IC) 13-20-14-5.3 states that anyone who is the source of 12 or more tires per year is required to maintain an annual record of waste tire manifests provided by a registered waste tire transporter. This file will show that the generator is properly managing waste tires through a registered transporter.

For detailed information on who may need to register with IDEM for the operation of a waste tire facility, what to expect, information regarding waste tire transporters, and additional information about IDEM's waste tire program, please refer to IDEM's Web site at www.idem.IN.gov/5124.htm.

► Waste Tire Processors

329 IAC 15-3 calls for annual reporting of the number of tires handled, manifest files maintained, and development of a facility contingency plan for dealing with emergencies.

► Waste Tire Storage Sites

IC 13-11-2-251 expands the storage definition and requires the registration of waste tire storage beyond the outside accumulation of 1,000 or more scrap tires to also include inside accumulations of 2,000 or more waste tires. Enclosed storage for less than 30 days may be exempt, as may storage in a U.S. DOT-approved, fully-enclosed trailer licensed to travel on the highway.

Construction or Demolition Debris

Be sure to check with local city and county officials for local ordinances and/or regulations regulating demolition projects. You may need a permit from the city and/or county where the demolition is to occur prior to beginning a demolition project.

The U.S. Environmental Protection Agency published *Managing Your Environmental Responsibilities: A Planning Guide for Construction and Development*, which contains two different sets of checklists and detailed discussion/case studies on major environmental areas (including storm water) affecting the construction industry. It is designed to help the construction industry understand which environmental regulations apply to them, and it can be used during different phases of a construction project. An electronic copy of the guide is available at www.epa.gov/compliance/resources/publications/assistance/sectors/constructmyer/index.html. For information on Indiana's storm water requirements, please refer to the *Indiana Storm Water Quality Manual* at www.idem.IN.gov/4899.htm.

► Vegetative Wastes

New construction, especially on previously undeveloped land, can generate leaf, brush, and woody wastes from land clearing which, under IC 13-20-9, are banned from disposal at solid waste landfills. For more detailed information on this topic, as well as who may be interested in using a construction or demolition landfill, burying, burning, or grinding construction or demolition debris, please refer to IDEM's Web site at www.idem.IN.gov/5133.htm.

Asbestos Removal Requirements

All facilities except residential buildings that have four or fewer dwelling units must be inspected by an Indiana licensed asbestos inspector prior to the commencement of demolition or renovation activities. If the inspector finds the presence of regulated asbestos-containing material (i.e., asbestos that may be in danger of becoming airborne) in the areas where the demolition or renovation operation will occur then the demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements outlined in 326 IAC 14-10, as well as those in 40 CFR 61, Subpart M (61.140 - 61.157). Even if no asbestos is present in the facility, proper notification of demolition or renovation activity requirements must still be followed. Homeowners are exempt from notification and removal requirements but not all disposal requirements.

For more information, including licensing requirements, please refer to IDEM's Web site at www.idem.IN.gov/4156.htm.

Lead-Based Paint Abatement

As per 326 IAC 23-2-2, the purpose of the Indiana lead-based paint program is to ensure that a person conducting lead-based paint activities in target housing or child-occupied facilities does so in a permanent manner that safeguards the environment and protects the health of the building's occupants, especially children who are six years of age and younger. Unlike the asbestos abatement program (which requires that asbestos be removed from structures which are going to be demolished or burned for fire training purposes), structures with lead-based paint may be demolished without any pre-demolition abatement.



FOR MORE INFORMATION

- Lead-based paint abatement requirements
- Licensing requirements for lead abatement activities

www.idem.IN.gov/4686.htm

See Title 326, Article 23 –
Lead-Based Paint Program

Hazardous Waste

All waste generators, except households, are required by law to determine if any of their waste is hazardous waste. Your business must keep records of its waste evaluations and other information used to determine what type of waste you have. These records must be kept at least three years after the waste is shipped off-site for treatment, storage, or disposal.

When reading this guide, do not confuse the term hazardous waste with hazardous material. Each term has specific regulatory definitions and requirements. Hazardous waste

shipped with a manifest is also a U.S. DOT hazardous material. There are some wastes that are not regulated as a hazardous waste, yet are regulated as a hazardous material. The following information discusses the general requirements regarding hazardous and universal waste. More detailed information is provided for common waste streams. The specific requirements that you must follow depend upon the quantities of hazardous waste generated and accumulated within a specific time period at your business. If you have any questions about hazardous waste management, call your environmental consultant or IDEM's Office of Land Quality at (800) 451-6027, ext. 2-8941 or (317) 232-8941 to discuss applicable requirements.

Guidance documents on hazardous waste are available at www.idem.IN.gov/4995.htm.

■ Defining Hazardous Waste

To be a hazardous waste, the material under consideration must first be classified as a solid waste. It is important to note that the term *solid* does not refer to the physical state of the waste. Instead, solid waste refers to any material that you will no longer be using for its originally intended purpose or a material that must be reclaimed before it can be reused. Solid waste can be a solid, a liquid, or a contained gas. Not all solid wastes are hazardous wastes. Hazardous waste can be one of two types:

1. Listed Waste

Your waste is considered hazardous if it appears on one of four lists published in 40 CFR Part 261, which is available at ecfr.gpoaccess.gov. Currently, more than 500 wastes are listed. Wastes are listed as hazardous because they are known to be harmful to human health and the environment when not managed properly. Even when managed properly, some listed wastes are so dangerous that they are called acutely hazardous wastes. Examples of acutely hazardous wastes include wastes generated from some pesticides that can be fatal to humans even in low doses.

2. Characteristic Wastes

If your waste does not appear on one of the hazardous waste lists, it still might be considered hazardous if it demonstrates one or more of the following characteristics:

Ignitable

- It catches fire under certain conditions. Examples of ignitable wastes are paints and certain degreasers and solvents.

Corrosive

- It corrodes metals or has a very high or low pH. Examples of corrosive wastes are rust removers, acid or alkaline cleaning fluids, and battery acid.

Reactive

- It is unstable and explodes or produces toxic fumes, gases, and vapors when mixed with water or under other conditions such as heat or pressure. Examples of reactive wastes are certain cyanides or sulfide-bearing wastes.

Toxic

- It is harmful or fatal when ingested or absorbed, or it leaches toxic chemicals into the soil or ground water when disposed of on land. Examples of toxic wastes include wastes that contain high concentrations of heavy metals, such as cadmium, lead, or mercury. You can determine if your waste is toxic by having it tested using the toxicity characteristic leaching procedure (TCLP), or by simply knowing that your waste is hazardous waste. For more information about TCLP and other test methods, refer to www.epa.gov/sw-846.

Exclusions and Exemptions

Some waste streams may meet applicable exclusion and exemption criteria and not be fully regulated as a hazardous waste. These exclusions and exemptions are too numerous to include in their entirety in this publication. For more information about exclusions and exemptions, refer to:

- *Resource Conservation and Recovery Act (RCRA) Orientation Manual* at www.epa.gov/epaoswer/general/orientat; and
- RCRA Training Modules at www.epa.gov/epaoswer/hotline/modules.htm.

Universal Waste

The Universal Waste Rule is a modification of the hazardous waste rules, enacted under RCRA, which is designed to reduce regulatory management requirements so as to foster the environmentally-sound recycling or disposal of certain specified categories of commonly generated hazardous wastes.

The effect of the Universal Waste Rule is to ease the regulatory burden on the facilities that manage universal waste, particularly by allowing more time for accumulation of these wastes in order to facilitate appropriate recycling or disposal.

What are Universal Wastes?

The Universal Waste Rule does not potentially apply unless a waste is first a characteristic or listed hazardous waste by definition under 40 CFR 261. Universal wastes include:

- **Batteries**
This category of universal waste includes nickel-cadmium (Ni-Cd) batteries and small sealed lead-acid batteries which are found in many common items, including electronic equipment, cell phones, portable computers, and emergency backup lighting.
- **Agricultural Pesticides**
This category of universal waste includes agricultural pesticides that have been recalled or banned from use, are obsolete, have become damaged, or are no longer needed due to changes in cropping patterns or other factors. They often

are stored for long periods of time in sheds or barns. Questions concerning the requirements or applicability of the Federal Insecticide, Fungicide, and Rodenticide Act to pesticide management should be directed to the Office of Indiana State Chemist, located at Purdue University, at (765) 494-1492.

- **Thermostats**

This category of universal waste includes thermostats that contain mercury, or the mercury-containing ampules removed from such thermostats. It does not include other mercury-containing items, such as thermometers, switches, gauges, or relays. The rule allows for the management of this waste either as intact thermostats, or as removed mercury-containing ampules when specified measures to prevent environmental release of mercury are followed.

- **Lamps**

This category of universal waste typically contains mercury and sometimes lead and is found in businesses and households. Examples include fluorescent, high-intensity discharge, neon, mercury vapor, high-pressure sodium, and metal halide lamps, and mercury-containing equipment.

Materials are continually added to the universal waste list. For the latest information, refer to www.epa.gov/epaoswer/hazwaste/id/univwast/index.htm.

Does the Universal Waste Rule Apply to Me?

The Universal Waste Rule is designed to allow for reduced regulatory requirements for the management of the specified wastes that otherwise would have to be managed under the full applicable RCRA hazardous waste management standards.

Wastes managed as universal wastes in accordance with this rule do not have to be counted toward the total amount of hazardous waste generated for purposes of determining hazardous waste generator status, as set forth in 40 CFR 261.5(c)(6). Those who manage universal waste that is subject to this rule must comply with certain management standards depending on whether they are:

1. A small quantity handler, which is defined as anyone who accumulates less than 11,000 pounds of universal waste at any time;
2. A large quantity handler, which is defined as anyone who accumulates 11,000 pounds or more of universal waste at a time;
3. A universal waste transporter, regardless of quantity; or
4. A destination facility, which is a treatment, storage, and/or disposal facility (TSDF) subject to requirements in 40 CFR 264 or 265, or a recycler not engaged in storage who is subject to 40 CFR 261.6(c)(2).

In general, most management standards for small quantity handlers and for large quantity handlers are identical, except in regard to U.S. EPA notification requirements (small quantity handlers are not required to notify), employee training, and waste tracking or record keeping (not required for small quantity handlers). Do not confuse the terms for universal waste handlers with the terms for hazardous waste generators (see *Hazardous Waste Generator Status* on page 39 for more information).

Universal waste transporters and destination facilities must comply with requirements (such as U.S. DOT regulations or TSDF standards, respectively) that are applicable to their activities. For more information, contact IDEM's Office of Land Quality at (317) 308-3103 or (800) 451-6027, ext. 308-3103.

■ Do I Need a Hazardous Waste Permit?

For information on permitting the treatment, storage, or disposal of hazardous waste, please refer to IDEM's Web site at www.idem.IN.gov/4995.htm.

For a list of fees associated with hazardous waste permits, please refer to IDEM's Web site at www.idem.IN.gov/5035.htm.

■ Identifying Your Waste

To help you identify some of the waste streams common to your business, consult the table on pages 38–39 for a list of typical hazardous wastes generated by small businesses. Commercial chemical products that are discarded might also become hazardous waste. For a complete listing of hazardous waste codes, please refer to 40 CFR 261 at ecfr.gpoaccess.gov. If your waste is hazardous, you will need to manage it according to appropriate federal and state regulations.

Chapter 2

Waste Management Regulations

Typical Hazardous Waste Generated by Small Businesses			
Business Type	How Waste Is Generated	Typical Waste	Waste Codes
Drycleaning and laundry plants	Commercial drycleaning processes	Still residues from solvent distillation, spent filter cartridges, cooked powder residue, spent solvents, unused perchloroethylene	D001, D039, F002, F005, U210
Furniture/wood manufacturing and refinishing	Wood cleaning and wax removal, refinishing/stripping, staining, painting, finishing, brush cleaning and spray brush cleaning	Ignitable wastes, toxic wastes, solvent wastes, paint wastes	D001, F001-F005
Construction	Paint preparation and painting, carpentry and floor work, other specialty contracting activities, heavy construction, wrecking and demolition, vehicle and equipment maintenance for construction activities	Ignitable wastes, toxic wastes, solvent wastes, paint wastes, used oil, acids/bases	D001, D002, F001-F005
Laboratories	Diagnostic and other laboratory testing	Spent solvents, unused reagents, reaction products, testing samples, contaminated materials	D001, D002, D003, F001-F005, U211
Printing and allied industries	Plate preparation, stencil preparation for screen printing, photoprocessing, printing, cleanup	Acids/bases, heavy metal wastes, solvents, toxic wastes, ink, unused chemicals	D002, D006, D008, D011, D019, D035, D039, D040, D043, F001-F005, U002, U019, U043, U055, U056, U069, U080, U112, U122, U154, U159, U161, U210, U211, U220, U223, U226, U228, U239, U259, U359
Equipment repair	Degreasing, equipment cleaning, rust removal, paint preparation, painting, paint removal, spray booth, spray guns, and brush cleaning	Acids/bases, toxic wastes, ignitable wastes, paint wastes, solvents	D001, D002, D006, D008, F001-F005

Typical Hazardous Waste Generated by Small Businesses			
Business Type	How Waste Is Generated	Typical Waste	Waste Codes
Pesticide end-users/ application services	Pesticide application and cleanup	Used/unused pesticides, solvent wastes, ignitable wastes, contaminated soil (from spills), contaminated rinsewater, empty containers	U136, P094, P123
Educational and vocational shops	Automobile engine and body repair, metalworking, graphic arts-plate preparation, wood-working	Ignitable wastes, solvent wastes, acids/bases, paint wastes	D001, D002, F001-F005
Photo processing	Negatives/prints, stabilization system cleaning	Acid regenerants, cleaners, ignitable wastes, silver	D001, D002, D007, D011
Leather manufacturing	Hair removal, bating, soaking, tanning, buffing, and dyeing	Acids/bases, ignitable wastes, toxic wastes, solvent wastes, unused chemicals	D001, D002, D003, D007, D035, F001-F005, U159, U228, U220

■ Hazardous Waste Generator Status

Your facility's hazardous waste status is based on the total quantity of the hazardous waste being generated and accumulated at your site over a specific time period. To determine your hazardous waste generator status, use your results from the previous section that identified all of the waste streams your business generates and ask yourself:

1. Is the waste material a listed or characteristic hazardous waste? If yes, then continue counting it. If no, then that waste is not subject to the hazardous waste regulations.
2. Is there a hazardous waste exclusion or exemption for that waste? If the waste has not been excluded or does not meet exemption criteria, then you have a hazardous waste that must be managed according to the hazardous waste regulations and you must count it. If the waste meets an exemption or has been excluded, then that waste is not subject to the hazardous waste regulations.

DO Measure:

- All quantities of listed and characteristic hazardous wastes that are:
 - Accumulated on the property for any period of time before disposal or recycling (drycleaners, for example, must count any residue removed from machines, as well as spent cartridge filters).

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- Packaged and transported away from your business.
- Placed directly in a regulated treatment or disposal unit at your place of business.
- Generated as still bottoms or sludges and removed from product storage tanks.

DO NOT Measure Wastes That:

- Are specifically exempted from counting. Examples include lead-acid batteries that will be reclaimed, scrap metal that will be recycled, used oil managed under the used oil provisions of 40 CFR 279, and universal wastes (e.g., batteries, pesticides, thermostats, and lamps) managed under 40 CFR 273.
- Might be left in the bottom of containers that have been thoroughly emptied through conventional means such as pouring or pumping.
- Are left as residue in the bottom of tanks storing products, if the residue is not removed from the product tank.
- Are reclaimed continuously on site without storing prior to reclamation, such as drycleaning solvents.
- Are managed in an elementary neutralization unit, a totally enclosed treatment unit, or a wastewater treatment unit, without being stored first.
- Are discharged directly to publicly owned treatment works (POTWs) without being stored or accumulated first. This discharge to a POTW must comply with the Federal Clean Water Act. POTWs are public utilities, usually owned by the city, county, or state, that treat industrial and domestic sewage for disposal.
- Have already been counted once during the calendar month and are treated on site or reclaimed in some manner and used again.
- Are regulated under the universal waste rule or have other special requirements. The federal regulations contain special, limited requirements for managing certain commonly generated wastes. These wastes can be managed following the less burdensome requirements listed below instead of the usual hazardous waste requirements.

Generator Categories

Once you know that you generate hazardous waste, you need to measure the amount of waste you produce per month. The amount of hazardous waste you generate per month determines your generator category. Many hazardous wastes are liquids and are measured in gallons—not pounds. In order to measure your liquid wastes, you will need to convert from gallons to pounds. To do this, you must know the density of the liquid. A rough guide is that 30 gallons (about half of a 55-gallon drum) of waste with a density similar to water weighs about 220 pounds (100 kg); 300 gallons of a waste with a density similar to water weighs about 2,200 pounds (1,000 kg).

U.S. EPA has established three generator categories, as follows, each of which is regulated differently:

1. Conditionally Exempt Small Quantity Generator (CESQG)

A CESQG generates 220 pounds or less per month of hazardous waste, or 2.2 pounds or less per month of acutely hazardous waste. You are exempt from hazardous waste management regulations provided that you comply with the basic requirements for CESQGs, which include (see also 40 CFR 261.5):

- CESQGs must identify all the hazardous waste generated.
- CESQGs may not accumulate more than 2,200 pounds of hazardous waste at any time.
- CESQGs must ensure that hazardous waste is delivered to a person or facility who is authorized to manage it.

To learn more, review the list of resources for CESQGs at www.epa.gov/epaoswer/osw/gen_trans/cesqg_resources.htm.

2. Small Quantity Generator (SQG)

You are considered an SQG if you generate between 220 and 2,200 pounds per month of hazardous waste. Requirements for SQGs include:

- SQGs may accumulate hazardous waste on site for 180 days without a permit, or 270 days if shipping a distance greater than 200 miles.
- The quantity of hazardous on site waste must never exceed 13,200 pounds.
- There must always be at least one employee available to respond to an emergency. This employee is the emergency coordinator responsible for coordinating all emergency response measures. SQGs are not required to have detailed, written contingency plans.

To learn more, review the list of resources for SQGs at www.epa.gov/epaoswer/osw/gen_trans/sqg_resources.htm.

3. Large Quantity Generator (LQG)

You are considered an LQG if you generate more than 2,200 pounds per month of hazardous waste, or more than 2.2 pounds per month of acutely hazardous waste (see *Defining Hazardous Waste* on pages 34–35). These wastes have been determined to be a threat to human health and the environment. A hazardous waste number is assigned to wastes that meet the designated criteria in the regulations. Depending on the waste, you may have some waste to which several waste numbers apply.

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Regulations allow businesses the option of handling some hazardous waste as a universal waste. Universal waste management is discussed in the *Universal Waste* section on pages 35–37. Requirements for LQGs include:

- LQGs may only accumulate waste on site for 90 days. Certain exceptions apply.
- LQGs do not have a limit on the amount of hazardous waste accumulated on site.
- There must always be at least one employee available to respond to an emergency. This employee is the emergency coordinator responsible for coordinating all emergency response measures. LQGs must have detailed, written contingency plans for handling emergencies.
- LQGs must submit a biennial hazardous waste report. See www.epa.gov/epaoswer/hazwaste/data/biennialreport for details.

To learn more, review the list of resources for LQGs at www.epa.gov/epaoswer/osw/gen_trans/lqg_resources.htm.

Use the totals calculated for the regulated hazardous waste streams to determine which one of the three generator categories applies to your facility (see table below). Your generator status may change from month to month depending on the type or quantity of activity. There are specific storage time and accumulation volume limits for any generator of hazardous waste. If the generator does not exceed these limits, a hazardous waste storage permit is not required. Reporting and record keeping requirements increase as a business generates more hazardous waste. It might be possible to reduce your generator status if you generate less hazardous waste at your business. This will result in your need to meet fewer regulations.

Hazardous Waste Generator Status		
Generator Status	Hazardous Waste Generated	Hazardous Waste Stored On-Site
Conditionally exempt small quantity generator (CESQG)	Less than or equal to 220 pounds per month (approximately one half of a 55-gallon drum)	Maximum accumulation of 2,200 pounds (approximately four 55-gallon drums)
Small quantity generator (SQG)	Between 220 and 2,200 pounds per month (approximately one half to four 55-gallon drums)	Maximum accumulation of 13,200 pounds (approximately thirty 55-gallon drums) and maximum storage time of 180 days. (Hazardous waste that is transported more than 200 miles away for recovery, treatment, or disposal can be stored for up to 270 days.)
Large quantity generator (LQG)	2,200 pounds or more per month (more than four 55-gallon drums)	Maximum storage time of 90 days

CESQGs and Hazardous Waste Management

As previously discussed, facilities that generate less than or equal to 220 pounds of hazardous waste in any one month are known as conditionally exempt small quantity generators. CESQGs are exempt from many of the regulations that small quantity and large quantity generators face.

If you are a CESQG, IDEM does not prohibit you from discarding your non-liquid hazardous waste as part of your regular trash. However, you should not throw hazardous waste in the regular trash because:

- Your hazardous waste is subject to your hauler's and the disposal facility's approval. Disposal of hazardous waste may violate the contract with your hauler and/or disposal facility.
- Even though your trash is taken to a site that is permitted to accept solid waste, you remain liable for it. If a hazardous material ends up in the soil or ground water, you can be held financially responsible for helping with the cleanup.
- If you throw hazardous waste in with your regular trash, you cannot be certain of its final destination. There are health hazards associated with these wastes, and you do not want to harm anyone in your community. Keep in mind that children occasionally play around dumpsters and that children and trash collectors may be exposed to your hazardous wastes.

CESQGs that wish to be excluded from full hazardous waste regulations must comply with the requirements for CESQGs.

■ Identification Numbers

SQGs and LQGs must obtain a U.S. EPA ID number. U.S. EPA and states use these 12-character numbers to monitor and track hazardous waste activities. You will need to use your U.S. EPA ID number when you manifest hazardous waste off site.

If your business is an SQG or an LQG (or moves into one of these classifications) and does not have a U.S. EPA ID number, you should contact IDEM's Office of Land Quality at (317) 232-7956 or (800) 451-6027 ext. 2-7956 to request a copy of U.S. EPA form 8700-12, Notification of Regulated Waste Activity (also available at www.epa.gov/epaoswer/hazwaste/data/form8700/8700-12.pdf).

■ Manifests and Record Keeping

The Hazardous Waste Manifest

The multi-copy manifest forms are designed to track hazardous waste shipments from their point of generation to their final destination. Specific requirements depend on the

type of waste shipped. You are required to list all the applicable hazardous waste numbers for each hazardous waste you ship with the manifests.

The generator of the waste, the transporter, and the treatment, storage, and disposal facility (TSDF) that receives the waste must each sign and keep a copy of the manifest as they handle the waste. For the majority of generators, manifesting will be required.

Hazardous wastes that you send off-site must be accompanied by the Uniform Hazardous Waste Manifest form unless you are shipping your hazardous waste to another state. In this case, you must use the receiving state's hazardous waste manifest form, if it has its own.

As the generator of the hazardous waste, you are responsible for ensuring that the manifest is correctly and completely filled out. The transporter must also be certain that the manifest is properly filled out before accepting the shipment. For this reason, many waste haulers will prepare the manifest for you and will then ask you to review and sign the manifest if all of the information is in order. Keep in mind that you are ultimately responsible for ensuring that the manifest is properly completed.

These are the specific steps to take when completing a manifest:

- Complete U.S. EPA Form 8700-22, Uniform Hazardous Waste Manifest, each time you have hazardous waste transported to an off-site facility that is located within the state of Indiana. You may obtain this form from your TSDF, transporter, broker, or a forms supply company.
- Ensure the person who signs the manifest has received proper training on the manifest form and procedures.
- Ensure each party that takes possession of the waste signs the original manifest and keeps one copy. The remaining portion of the manifest continues on with the hazardous waste shipment until it reaches its final destination.
- Ensure that the TSDF sends a signed copy of the manifest back to you to verify that the shipment actually arrived.

Exception Report Requirements for LQGs

If the copy of the manifest is not sent to you within 35 days of the date the waste was accepted by your hauler, you must contact your hauler and/or the designated facility to determine the status of the hazardous waste.

If the copy of the manifest is not sent to you within 45 days of the date the waste was accepted by your hauler, you must complete an exception report and submit it to IDEM's Office of Land Quality. The exception report should be accompanied by:

- A legible copy of the manifest for which you do not have confirmation of delivery; and
- A letter that you or your designated representative has signed. The letter must explain the efforts you've taken to locate the hazardous waste and the results of those efforts.

Exception Report Requirements for SQGs

If the copy of the manifest is not sent to you within 60 days of the date the waste was accepted by your hauler, you must submit to IDEM's Office of Land Quality a legible copy of the manifest, along with a note or letter indicating that you have not received confirmation of delivery. Finally, you should keep copies of all hazardous waste manifests for three years.

Land Disposal Restrictions

Small quantity and large quantity generators must send a one-time written notice with the initial shipment of hazardous waste to the TSDF containing specific language advising the TSDF whether or not the hazardous waste shipment is restricted from land disposal. A new notification must be sent when there is a waste or facility change. This is called a land ban notification.

The land disposal restriction (LDR) program requires hazardous waste not meeting LDR standards to be treated to render it less harmful to the ground water, surface water, and air when the hazardous waste is disposed of in landfills, surface impoundments, injection wells, concrete vaults, underground mines or caves, waste piles, or other land disposal locations. Both listed and characteristic hazardous wastes must meet the LDR treatment standards before being land disposed. Compare the standards that are found in 40 CFR 268.42, available at ecfr.gpoaccess.gov, with the hazardous waste numbers generated at your facility.

The specific treatment standards are too numerous to include in this guide. For more information, refer to www.epa.gov/epaoswer/hazwaste/ldr/ldr-sum.pdf and www.epa.gov/epaoswer/hazwaste/ldr/index.htm. Discuss your specific LDR requirements with your TSDF or IDEM. Many TSDFs have preprinted the specific statements on forms that you can use to meet this requirement and will help you properly fill out the information. You are required to keep copies of the land ban notifications and certifications for at least three years after the last shipment of that waste.

Common violations regarding land ban notifications include:

- Failing to keep a copy;
- Missing a category or subcategory of waste information; and
- Listing incorrect or outdated treatment standards or information that is inconsistent with the waste characterization.

Waste Management Regulations

Annual and Biennial Reports

Small and large quantity generators and TSDFs must submit a report each year which summarizes the hazardous waste they have shipped off-site or received from off-site during the previous year.

CESQGs that, for any one calendar month, generate more than 220 pounds or accumulate on-site at any time more than 2,200 pounds of hazardous waste will also be required to complete and submit the annual manifest report.

LQGs and TSDFs of hazardous waste must submit a report every even-numbered year which summarizes the RCRA hazardous waste generated, shipped off-site, treated on-site, or received from off-site during the previous odd-numbered year.

In even-numbered years, LQGs and TSDFs should submit the biennial, but not the annual, report for activities conducted during the previous odd-numbered year. For more information on the annual and biennial reporting requirements, please visit IDEM's Web site at www.idem.IN.gov/5038.htm#report.

Due Dates:

Reports must be postmarked by March 1.

Extensions until April 1 may be granted for the biennial report only.

Reporting Schedule				
Report Period	Date Due	SQGs	LQGs	TSDFs
Jan. - Dec. 2008	March 1, 2009	Annual	Annual	Annual
Jan. - Dec. 2009	March 1, 2010	Annual	Biennial	Biennial
Jan. - Dec. 2010	March 1, 2011	Annual	Annual	Annual

■ Hazardous Waste and Universal Waste Accumulation On-Site

Accumulation Time Limits

You are allowed to accumulate your hazardous waste on-site in containers or tanks for a specified number of days. If you exceed this period, you must obtain a permit for a storage facility. These limits are determined by your generator status and are identified below:

- Conditionally exempt small quantity generators (CESQGs) do not have a limited accumulation time, as long as the quantities accumulated are less than 2,200 pounds of non-acute hazardous waste or less than 2.2 pounds of acute or severely toxic hazardous waste. This limit was set so that a small business can accumulate enough hazardous waste to make shipping and disposal more economical.

- Small quantity generators (SQGs) can accumulate hazardous waste up to 180 days, or 270 days if the distance to the disposal site is over 200 miles. The total waste quantity must not exceed 13,200 pounds of non-acute hazardous waste or 2.2 pounds of acute or severely toxic hazardous waste.
- Large quantity generators (LQGs) can only accumulate hazardous waste up to 90 days.

During this time period, hazardous waste must be properly stored at your facility to prevent contamination of the environment. You must comply with specific state and federal regulations if your company has an SQG or LQG status. If you are a CESQG, you are not required by law to meet all of the requirements providing you do not exceed the 2,200 pounds of non-acute hazardous waste accumulation limit. However, you must still operate your business in a manner to prevent contamination and must assure delivery of hazardous wastes to their appropriate destination. You are also responsible for any contamination that occurs. It is recommended that you practice storage and inspection procedures similar to those required of the SQGs and LQGs to provide safeguards against environmental contamination.

Satellite Accumulation

It is permissible to accumulate up to a total of 55 gallons of hazardous waste or one quart of acutely or severely toxic hazardous waste in labeled container(s) at the point of generation as long as the operator has control of the processes generating the waste. This accumulation is generally referred to as using satellite containers. These containers must be labeled with the words “Hazardous Waste” or other words that identify the contents of the container, and be kept closed at all times except when waste is being added.

There is no limit on the number of containers that can be used at one satellite location or how long the satellite container can be kept at its location, as long as it is kept closed, and the 55-gallon total volume is not exceeded. Separate containers must be used for each waste stream, however. It further requires that when greater than 55 gallons of hazardous waste commences accumulating at a satellite area, the container(s) holding the excess of 55 gallons must additionally be marked with the date on which the accumulation of the excess of 55 gallons began, and must be managed in accordance with all applicable requirements for 90-day or less, or 180-day or less, storage [referenced in 40 CFR 262.34(a)] and removed from the satellite accumulation area to the designated 90-day or 180-day hazardous waste storage area within three days.

Universal Waste

Universal waste handlers can accumulate universal waste up to one year after generation or after receiving the waste from another handler. A longer storage time may be allowed if it is proven that it is necessary to accumulate enough universal waste to facili-

tate proper recovery, treatment, or disposal. A handler must be able to show how long they have had the waste. This can be done by one of the following:

- Labeling the container with the first date universal waste was put into it or when the container was received.
- Labeling the individual item with the date it was considered a waste or received as a universal waste.
- Maintaining an inventory system on-site, which identifies the date it became a waste or was received.
- Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste was put in that area.
- Using any other method that clearly demonstrates how long the universal waste has been accumulating.

Transporters may store universal waste up to 10 days. If transporters exceed this period, they need to manage the universal waste according to the respective handler classification.

Container and Tank Requirements

Hazardous waste is commonly stored in either portable containers, such as pails, 55-gallon drums, and totes, or in aboveground storage tanks. Generally, hazardous waste tanks must have secondary containment and leak detection systems; must follow special requirements for ignitable, reactive, and incompatible wastes; and must follow requirements for closure and post-closure. Once each operating day, the overfill/spill control equipment, monitoring equipment data, and the aboveground portions of the tank system, including construction materials and secondary containment, must be checked to detect releases or corrosion.

Avoid overfilling containers, especially if they are stored outdoors. Fifty-five gallons of some hazardous liquids can expand to 60 gallons or more when exposed to the heat and sun and may overflow. General requirements for all storage containers include:

- Containers must be labeled (see *Labeling Requirements* on pages 49–51).
- Containers must be maintained in good condition.
- Any leaking containers must be replaced.
- Containers must be kept closed except when adding or removing waste.
- Containers must be compatible with the type of waste being stored in them.
- Incompatible wastes must not be placed in the same container.
- All areas where containers holding hazardous waste are stored must be inspected, at least weekly, looking for leaks and for deterioration caused by corrosion or

other factors. If a container holding hazardous waste is not in good condition, or if it begins to leak, the owner or operator must transfer the hazardous waste from this container to a container that is in good condition, or manage the waste in some other way that complies with the requirements.

- Containers must be kept in an area that meets the required isolation distance from property lines. Check for any local requirements. LQGs must have ignitable and reactive hazardous waste stored at least 50 feet from the property line.

There are additional federal hazardous waste regulations regarding air emissions of hazardous waste that are too complex to include in this guide. See 40 CFR Part 264 and Part 265, which address air emissions from process vents associated with certain types of hazardous waste management processes (Subpart AA) and leaks from certain types of equipment at TSDFs and LQGs (Subpart BB). At such facilities, owners and operators are required to install control equipment and employ management practices to reduce air emissions from affected units and equipment. Subpart CC regulates organic air emissions from tanks, surface impoundments, and containers located at hazardous waste treatment storage and disposal facilities and large quantity generators.

For more information on these requirements, please refer to U.S. EPA's Web site at www.epa.gov/epaoswer/hotline/training/air.pdf.

Universal Waste

Universal waste must be stored in a way that prevents any spills or releases. Containers must be kept closed, in good condition, and be compatible with the type of universal waste stored in them.

■ Labeling Requirements

The proper labeling of waste helps to ensure that it is not mismanaged. Labeling helps to protect workers. If the contents of drums are not known, the chances of a worker being exposed to hazards or being injured are great. An explosion can occur if wastes that are incompatible are mixed with unknown wastes in a drum. Labeling requirements differ for hazardous waste being accumulated on-site and that being shipped. More extensive information is required on labels for shipping. In addition to meeting the labeling requirements for containers, you should also clearly mark the accumulation area so employees know that hazardous waste is being kept there, and any special precautions, such as posting "No Smoking" signs.

U.S. Department of Transportation regulations specify which containers, packaging, labels, and placards must be used for shipping hazardous materials. The hazardous waste regulations require SQGs and LQGs and universal waste handlers to have the appropriate placards available for the transporter. For more information about these shipping requirements, visit U.S. DOT's Web site at <http://hazmat.dot.gov/>.

Labeling Hazardous Waste Satellite Containers

Satellite accumulation containers must be labeled with the words “Hazardous Waste,” or other words that identify the contents, and kept closed at all times, except when waste is being added. Once the volume exceeds the allowable amount, the container holding the excess accumulation must be:

- Labeled with that date (which would be considered the accumulation date); and
- Moved into the accumulation area within three days.

Labeling Hazardous Waste for Accumulation On-Site

Each container must be labeled with the following when a waste is accumulated on-site and not in a satellite area:

- The words “Hazardous Waste.”
- An accumulation date (meaning the date waste was first put into the container, unless it was first a satellite container – then it would be the date the volume in the container met or exceeded the allowable amount).

Although not required, it is helpful for employees to also label the storage containers with the common name of the waste with which it is being filled. For example, containers also might be labeled with “Used Parts Washer.”

You are not required to use any specific label to meet these requirements. You can stencil the information on the containers or you can purchase commercially made labels. You may also use the shipping label as long as the above information is filled out. Make sure the label you use does not become unreadable or dissolve if exposed to the weather or hazardous materials. This can be a problem with containers holding solvents.

Labeling Universal Waste for Accumulation On-Site

You need to label the individual universal waste (such as each thermostat) or the container holding the universal waste with the following specific language, or, per IC 3.1-16-2, with other words that identify the container’s contents, while it is being accumulated:

- **Electric lamps**
Use the words “universal waste electric lamps,” “waste electric lamps,” or “used electric lamps.”
- **Batteries**
Use the words “universal waste battery(ies),” “waste battery(ies),” or “used battery(ies).”
- **Mercury devices**
Use the words “universal waste mercury” or “waste mercury.”

- **Pesticides**

Include the legible label that was on or accompanied the original product and the words “Universal Waste Pesticide(s)” or “Waste Pesticide(s).” If the pesticide label is not readable, then use the appropriate label as required by U.S. DOT.

Labeling Hazardous Waste for Shipment

Hazardous waste must be shipped in containers acceptable for transportation and properly labeled. Each container of 110 gallons or less must have the hazardous waste number identifying the waste as well as the following statement:

“Hazardous Waste – Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.”

A container must also have the headings “Generator Name and Address” and “Manifest Document Number,” with that information provided. This label and others are available from commercial firms including mail order companies. Properly labeled containers also include:

- Labels clearly identifying the type of waste and its hazards in that particular container.
- The accumulation date.
- Appropriate U.S. DOT labels for characteristics, such as flammable and corrosive.
- Label protection from solvents and weather. You may want to cover the label with varnish or clear packing tape and keep the container under roof cover.

Your hazardous waste transporter should be able to help you properly label the containers for transport. For information on additional transportation requirements, visit U.S. DOT’s Web site at <http://hazmat.dot.gov/>.

Labeling Universal Waste for Shipment

Before shipping the universal waste to another universal waste handler, the originating handler must have made arrangements so that the shipment will be received. If the universal waste is a hazardous material under U.S. DOT regulations, then that waste has to be packaged, labeled, marked, and placarded according to the requirements under 49 CFR 172-180. Discuss these requirements with U.S. DOT (see *Transportation, Shipping and Receiving of Hazardous Materials* on pages 114–118).

Selecting a Transporter and Treatment, Storage and Disposal Facility

Ultimately, the generator is responsible for assuring proper transportation and disposal of the waste after it leaves the facility. As such, the waste needs to be properly prepared for shipment and a reputable firm hired to handle the waste. It is important to select a waste transporter and treatment, storage and disposal facility (TSDF) that you are

comfortable doing business with and that provides the best services for your particular circumstances, at a reasonable price. Transporters can assist you by reviewing the manifest for correct and complete information, providing information on disposal facility options and costs, and ensuring safe and timely transport of your wastes. Transporters may be independent companies or may be affiliated with a TSDF. A listing of permitted and licensed transporters and TSDFs is available in the telephone directory's yellow pages under the heading Waste Reduction, Disposal, and Recycling Service. There are requirements for transporters hauling either hazardous waste or liquid industrial waste. Requirements for transporters include: obtaining a U.S. EPA ID number, complying with the manifest system, responding appropriately to hazardous waste discharges, and complying with all applicable U.S. DOT regulations.

You will want to select a TSDF that can handle, treat, and dispose of the waste you generate. A TSDF accepts only those types of wastes allowed by its permit or operating license. Special fees may be charged for small quantities of hazardous waste requiring extra handling by the facility. In addition, some facilities have their own requirements as to how they accept waste material. For example, some companies will not accept hazardous waste in drums even though this is a common storage and transportation method.

Because transporter and TSDF services and costs are highly varied, you should contact and interview several facilities to obtain price estimates before making a selection. You might also want to tour the TSDF yourself to see its operations. Remember that, as the generator, you are ultimately responsible for how your waste is transported and disposed, so it is wise to choose a company on more than price. Use the following list of questions as a starting point for your interviews, and compare the companies' responses before making your selection.

■ Questions to Ask Prospective Transporters and TSDFs

1. Is the hazardous waste transporter permitted and registered in Indiana, and does the TSDF have an operating permit?
2. What type and amount of insurance does the transporter or TSDF carry? Because you are ultimately responsible for the waste you generate, you should make sure that the company has insurance to cover accidents and environmental spills. To protect yourself financially, ask to see proof of the insurance.
3. If you are hiring an independent transporter, find out what TSDF the transporter uses for your type of waste. If the waste is going to a treatment facility before disposal, where is the ultimate place of disposal for the treated wastes?
4. Does the transporter or TSDF offer special services for small volumes of waste? Some transporters might not service SQGs or CESQGs.

5. What must you do before your waste is picked up by the transporter or accepted at the TSDF?
6. Does the transporter or TSDF serve other businesses similar to yours? If so, obtain telephone numbers and contact these companies to evaluate the services they received.
7. Does the transporter deliver waste to the treatment, storage, or disposal facility the same day that it's picked up? If not, ask questions about the company/location where the waste will be stored.
8. What steps does the transporter or TSDF operator take to avoid spills or leaks and minimize the facility's own legal liability? You may want to note for your records the method of temporary waste storage used at a treatment or recycling facility. If your waste is going to a hazardous waste landfill, ask about their leachate control and ground water monitoring provisions. Use this information when comparing companies. A company that costs more to take your waste but practices an extensive environmental protection program may actually be cheaper in the long run than a company that initially costs less but does not practice adequate environmental protection. If contamination occurs, you can be held financially responsible for the site cleanup costs.
9. Have any violations of state regulations occurred? For Indiana companies, call IDEM's Office of Enforcement at (317) 233-5529 or (800) 451-6027, ext. 3-5529, to find out whether any transporter or TSDF you are considering has been subject to fines or citations for violations of state regulations. Most transporter and TSDF files are also available for public review.
10. Will they enter into a written contract with you? For liability protection, it is a good idea to have a written contract that clearly identifies what specific services the company will provide. Be cautious of firms that do not want to offer a written contract for services.

If you are a CESQG, you are not required to hire a permitted and registered hazardous waste transporter or dispose of your hazardous waste at a TSDF. However, it is recommended that you use a hazardous waste disposal facility or recycle your waste. In a few Indiana areas, the local household hazardous waste collection programs accept hazardous waste from CESQGs for a fee. Your waste that is not considered a liquid waste (i.e., passes the paint filter liquids test) can be disposed of at a sanitary landfill, if the landfill authority will accept it.

Disposing of Hazardous Waste On-Site

You may NOT dispose of hazardous waste on your site unless you have obtained a permit from IDEM. Under limited circumstances, it might be legal to dispose of certain types of waste into a sanitary sewer or on your site without a TSDF permit. See Chapter

3, *Water and Wastewater Regulations*, for more information. Contact your local wastewater treatment facility or IDEM's Office of Water Quality at (800) 451-6027, ext. 4-2579 or (317) 234-2579 for information about which wastes from your facility can be disposed of in this manner.

Employee Emergency Training

This section discusses emergency training requirements under the hazardous waste regulations. Other regulations also require employees to be trained on proper waste handling and how to effectively respond to emergencies in a manner that protects their safety and the environment. Training involves familiarizing employees with emergency procedures; emergency equipment; emergency systems, such as communication or alarm systems, response to fires or explosions, shutdown of operations, response to unplanned sudden or non-sudden releases of hazardous waste; and, their roles in implementing the hazardous waste contingency plan relevant to their positions.

Training is required for all employees who are involved with hazardous waste management. You can tailor your training specifically to the hazardous waste procedures relevant to your facility and employee involvement. In addition to having emergency training requirements, hazardous waste generators and universal waste handlers have release planning, notification, and response requirements. See Chapter 8 on page 134 for details of those requirements. CESQs do not have specific training requirements under the hazardous waste regulations. SQGs can provide emergency training in an informal manner or concurrently with other training sessions. Written records are not required, although they are encouraged. There is no stipulated review period.

LQGs have specific employee training requirements that include keeping written records of employee training. Keep training records for current employees until the facility closes. Keep training records for employees who left the company three years after the last date they worked. Hazardous waste training can be provided in a classroom setting or during on-the-job instruction by an expert or someone with significant experience in hazardous waste management. It is necessary to have a written description of the type and amount of training. Employees must be trained within six months after starting work on a job involving hazardous waste and then receive annual training. Annual training means one year from the date of the initial training. This training can be combined with other training sessions as long as a portion of the training is clearly devoted to hazardous waste requirements. Training under the Hazard Communication Standard alone, as required by the Indiana Occupational Safety and Health Administration, is not sufficient to meet the hazardous waste training requirements.

Some common hazardous waste training violations include:

- Missing or incomplete documented records of required training for LQGs (e.g., job title, job description, or employee name is omitted);

- Missing written training description for LQGs;
- Failing to have employees trained annually for LQGs; and/or
- Using another required emergency training program which does not have a portion clearly devoted to the hazardous waste requirements.

IDEM non-rule policy documents that pertain to this section, including *Hazardous Waste Personnel Training*, are available on IDEM's Web site at www.idem.IN.gov/5026.htm.

Small quantity generators and large quantity generators must inform employees who handle or have responsibility for managing universal waste about the proper handling and emergency procedures relative to their responsibilities and appropriate for the type of universal waste handled at that facility.

Managing Specific Waste Streams

For information regarding the proper management of various types of waste that are commonly found in manufacturing operations, please check IDEM guidance documents on specific waste disposal issues on IDEM's Web site at www.idem.IN.gov/5026.htm.

Used Oil

Used oil includes any petroleum-based or synthetic oil that has been used, such as engine oil, sludge from used oil tanks, transmission fluid, refrigeration oil, compressor oil, and hydraulic fluid. One gallon of oil can contaminate up to one million gallons of water. The effect of oil on organisms can include genetic damage, structural deformities, reduced egg volume, and reproductive failure.

Virgin (unused) oil contains low levels of carcinogenic compounds, such as benzene and toluene. In addition to these compounds, oil also contains relatively high levels of polycyclic aromatic hydrocarbons (PAHs), which may be absorbed through the skin of employees who handle the oil. PAHs are linked to a number of types of cancer, including skin tumors. Business personnel should avoid prolonged or frequent repeated skin contact with oil by wearing impervious protective gloves and by washing hands and other exposed areas thoroughly after contact. Because oil is a combustible liquid, it must be properly handled, and oil soaked clothing must be changed to avoid a fire safety hazard.

■ Additives and Contaminants – Hazards and Impacts

As oil circulates through the engine, the oil may become contaminated with heavy metals, including lead. In addition, used oil is also contaminated with products of incomplete combustion, which contain a number of known carcinogens.

High concentrations of lead may make the oil a hazardous waste. Oil may also become contaminated through contact with gasoline, which could make the used oil a hazardous waste due to benzene contamination and/or flammability.

■ Used Oil Management

Two environmental management options currently exist for businesses with used oil. The first option is to recycle your used oil or to burn it for energy recovery under the Used Oil Rule. The second option is to dispose of your used oil, following all applicable solid and hazardous waste rules. Managing your used oil under the Used Oil Rule (rather than the solid and hazardous waste rules) lessens your regulatory requirements. Managing your used oil may be done in a number of different ways. Listed below are suggested practices that you should follow in order to ease your regulatory requirements and improve the environmental performance of your business:

- If you store your used oil in a tank, the tank must meet the Indiana Department of Homeland Security, Division of Fire and Building Safety's requirements for Class I liquids (even though used oil is a Class III(b) liquid). Note that the Division of Fire and Building Safety defines a tank as anything that holds more than 60 gallons.
- Instruct employees to clean hands and arms frequently if they are exposed to used oil and/or grease to prevent skin irritation. Employees must not use gasoline to cleanse themselves or for other cleaning purposes.
- Instruct employees to change oil soaked clothing, as it is a fire safety hazard in addition to being a source of skin problems.
- Clean up spills promptly.
- Keep oil storage containers and aboveground tanks in good condition. Drums and storage tanks used to store oil cannot be rusting or leaking.
- Label all used oil storage tanks, and piping, or containers with the words "Used Oil."
- Recycle your used oil or burn it for energy recovery in an authorized device.
- Do not mix used oil with hazardous wastes.
- Determine the halogen content of the used oil by using generator knowledge or by using a test kit for halogens (available from safety supply dealers). If the used oil contains more than 1,000 parts per million (ppm) total halogens, it is presumed to have been mixed with a hazardous waste and must be treated as a hazardous waste unless you can demonstrate that the source of the halogens was not from mixing a hazardous waste with your used oil.

- For off-site shipments, you must ensure that the transporter has a U.S. EPA ID number. You may transport less than 55 gallons of your own used oil (or oil that has been collected through a household do-it-yourself collection program) at any time to a used oil collection center or to your own aggregation point without a U.S. EPA ID number. An aggregation point is a collection center designed to accept small amounts of used oil and store it until enough is collected to ship it elsewhere for recycling. Aggregation points collect oil only from businesses run by the same owner/operator and from individuals.

■ Recycling or Burning Used Oil for Energy Recovery (40 CFR 279)

Complying with the Used Oil Rule means that you do not have to manage your used oil or the settled solids from your used oil tank as a hazardous waste. Even if the used oil to be recycled or fuel blended is contaminated with a hazardous material from product formulation or through its intended use (such as when contaminants mix with oil in the crankcase), the used oil is still regulated under the Used Oil Rule rather than as a hazardous waste. In order to comply with the Used Oil Rule, you must properly manage your used oil (e.g., don't mix anything other than waste fuels with your used oil), and you must either recycle your used oil or burn it for energy recovery. Oil that is intentionally or accidentally mixed with a hazardous material must be managed as a hazardous waste.

Under the Used Oil Rule, both re-refining and burning of used oil for energy recovery are considered to be forms of recycling. Re-refining is the preferred method of managing used oil because it preserves our limited resources. However, in some instances, such as when you are disposing of settled solids from the bottom of your used oil tank, or disposing of petroleum contaminated wipes, sorbents, or spill materials, burning the material for energy recovery is the better management option. If you choose to burn your used oil in your own used oil furnace, be aware that there are additional rules that you must follow under the Used Oil Rule. Because small oil-burning furnaces are not as clean-burning or as efficient as industrial furnaces, IDEM recommends that you send your used oil to a fuel blender rather than burning it on-site.

Some requirements for burning used oil include:

- Have a used oil burner with a maximum capacity of not more than 500,000 Btu/hr.
- Install the used oil burner in the garage area (not the business's office) and in accordance with the regulations of the Division of Fire and Building Safety.
- Vent the heater's combustion gases outside of the building. Note that the used oil burner cannot be connected to the heating duct work.
- Burn only used oil that the business generates or used oil received from households that bring their used oil to your business.

■ Disposing of Your Own Oil

If a generator of used oil wishes to dispose of it, he must first determine whether it is a hazardous waste, and then dispose of it accordingly.

For More Information

Compliance and Technical Assistance Program (CTAP)	CTAP provides free and confidential environmental assistance to Indiana businesses. CTAP is a non-regulatory program. CTAP staff are available weekdays to answer your environmental questions regarding air, water, and waste regulations, pollution prevention, and recycling. CTAP offers a Quality Assurance Guarantee that IDEM will not issue a Notice of Violation assessing a gravity-based penalty against a regulated entity that has sought out, received, and relied upon CTAP's written compliance assistance prior to the alleged violation. (800) 988-7901 (toll free in Indiana) or (317) 232-8172 www.idem.IN.gov/4108.htm
Emergency Response	IDEM – Office of Land Quality <i>Emergency Response Section</i> (317) 233-7745 or (888) 233-7745 (toll free nationwide) www.idem.IN.gov/4155.htm
Industrial Waste Compliance	IDEM – Office of Land Quality <i>Industrial Waste Compliance Section</i> (317) 308-3013 or (800) 451-6027, ext. 308-3013 www.idem.IN.gov/4996.htm
Resource Conservation and Recovery Act	www.epa.gov/osw
Solid Waste Management Districts	www.recycle.IN.gov/2888.htm
Technical Compliance	IDEM – Office of Land Quality <i>Technical Compliance Section</i> (317) 308-3040 or (800) 451-6027, ext. 308-3040